NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
WASHINGTON, D.C.   20546

REPLY TO
ATTN OF

January 13, 1975

MEMORANDUM

TO   :   Heads of Program and Staff Offices

FROM   :   JH/Director, Headquarters Administration

SUBJECT: Study of Headquarters Communication Processes

Much is being said and done under the term of "Word Processing" in both industry and government. "Word Processing" may be defined as transforming ideas into printed communications through the systema tized use of people and procedures, aided by equipment. This definition places equipment in proper perspective in light of the increasing demand for such equipment which is very expensive and a common mistake is to purchase more than is needed. In addition, providing such equipment for one organizational group without analyzing all phases of the communication process--input, output and distribution or dissemination--often creates problems of equipment compatibility, redundant work processes and interoffice communication and coordination.

A number of government organizations have implemented the word-processing concept with considerable improvement to the quality and timeliness of their communications at significantly reduced costs. We intend to draw on the experience and expertise of such organizations, as well as specialists in word processing at the National Archives and Records Service (NARS), as we review and evaluate our communication processes and pursue means to improve them. Since most of the automated typing and editing equipment at Headquarters was obtained over a long period of time and for specific and relatively limited requirements, a review and evaluation of the current situation is one of the initial steps toward developing a plan to improve communication processes and broaden word processing applications.

The Administrative Services Division, headed by Don Lichty, will be conducting an assessment and applications survey during the balance of this month and early February. The objective of the survey is to assess how automated communication equipment is being used currently and to review generally how the communication process is organized and staffed. Procedures and operation of

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... and distribution phases of the communication process
... and recommendations made as to possible options
... In the next few days, your office will be visited
... of a survey team if you are using automated typing or
... communications equipment or if your office is selected
... correspondence sampling and analysis. Please designate someone
... with the team and inform Don Lichty's office on extension
... at your earliest convenience.

It is important that the survey team obtain accurate and complete
... only from employees preparing correspondence, but also
... employees originating communications. The cooperation of all
... in the survey is solicited and will determine the
... effectiveness of the results. If you have any questions,
... call me on extension 53706 or Don Lichty on the above
... extension.

C. V. Vogel

Distribution:
SRD-A minus Field

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
WASHINGTON, D.C.   20546

REPLY TO
ATTN OF:

January 21, 1975

MEMORANDUM

TO   :   Headquarters Employees

FROM   :   JH/Director, Headquarters Administration

SUBJECT: Word Processing

In order to make the most efficient use of time of all
Headquarters employees, we are considering expansion of
word processing concepts and equipment.

For our purposes, "word processing" is used to mean the
transforming of ideas into typed communications through
the sytematized use of people and procedures, aided by
automated typing and editing equipment.

For some time we have used automated typing and editing
equipment in Headquarters to handle heavy typing work
loads in selected offices, but with no systems approach.
However, increasing use is being made of word processing
in private industry and government to include so-called
administrative support centers. Substantial experience
indicates that word processing can offer benefits of
reduced cost, higher output of both secretaries and
principals, more responsiveness in preparing written
communications, less secretarial fatigue, and more
attractive career fields to some personnel. In view of
increasing work loads and reduced staffing and budgets,
management has decided to consider thoroughly what
advantages word processing might offer to Headquarters.

To evaluate how effectively we are using the word
processing equipment on hand and to identify work load
situations where additional equipment or word processing
might be desirable, a survey is underway under the direc-
tion of Don Lichty, the Director of the Administrative
Services Division.

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A detailed study will be made over the next few weeks to determine if a word processing system would be feasible for the Office of the Associate Administrator for Center Operations and subordinate offices to be located in close proximity in FOB-6. The Office of Applications has offered to set up a pilot word processing system for a program office. Their feasibility study will be completed soon and an implementation plan put into effect at an early date.

It should be emphasized that word processing is not necessarily the best approach to accomplishing work which includes the typing function, and we have no preconceived ideas about using it. In some situations word processing may change staffing patterns and office procedures. We will use the experience of other agencies to try to bring such changes about with your participation and support.

You will be kept informed of the status and progress of our plans, and your questions are invited for answer in the Weekly Bulletin.

L. W. Vogel

TO:

FROM:

SUBJECT:

As regards the current Word Processing Study underway, please be advised that two teams have been organized (one to operate in Code AC and the other in Code E) and will conduct their exercises under the direction of specially qualified leaders provided by Dr. Ruth Thomas of National Archives and Records Service.

The study teams, as listed below, met today for a pre-operation meeting, and study activity will commence with a meeting of all official coordinators (see attached list) at 1:30 p.m., on January 22, 1975, in Room F5026.

On the following day, meetings will be held with all secretaries desig- nated to participate in the study. Secretaries will meet in Room F5026 at the time directed by the Office Coordinators.

Code AC Study Team	Code E Study Team
Leader: Mary Davis, NARS	Leader: Ken Dulabham, NARS
Carl Steinmetz, Code JHA-1	Jean Dunn, Code JHA-21
Rupert Bullard, Code DM	Juanita Drummond, Code W
Lila Hayden, Code AC	Stella Steele, Code JHA-i

The study exercise will probably take two or more weeks of interviews with those involved; it is an important undertaking for Headquarters at this time when we see nothing down the road but tight budgets and reduced personnel ceilings. Word Processing might well be the answer to increased productivity in a fixed manpower situation. Hence, your full cooperation and positive support is needed.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
WASHINGTON, D.C. 20546

REPLY TO
ATTN OF: ECD

January 21, 1975

MEMORANDUM

TO: All Code E Secretaries

FROM: ED-M/Deputy Associate Administrator for
                Applications--Management

SUBJECT: Secretarial Workload Survey

In November, you were most helpful during an IBM survey of
our secretarial workload as an aid to determining office
needs for Word Processing equipment. Although this survey
collected only gross estimates of how you divide your work
day, it revealed a number of areas in which significant
benefits are potentially possible by improving our "Word
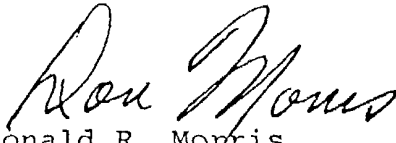Processing" capabilities.

In order to justify the purchase or lease of the new equip-
ment that will make these improvements possible, we must now
conduct a much more detailed survey of the secretarial work
load. This must be done by our own people as we cannot afford
to have the survey questioned because of the possible bias
of an equipment manufacturer.

Consequently, we are asking each secretary in Code E to main-
tain for two weeks a detailed record of how her workday is
divided among the variety of tasks she performs. The collection
of data is to begin on Monday, January 27 and will continue
through Friday, February 7. The Administrative Services
Division and Word Processing specialists from the National
Archives Record Service of GSA will be working with us during
the entire period. We will be meeting with them this week
to learn more about the mechanics of the survey and just how
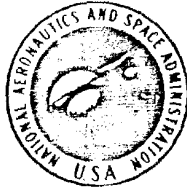it will be handled.

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The results of this survey will help determine how improvements in Word Processing capability will help us get our work done with less effort. We're counting on each of you to make this work!

Donald R. Morris

cc:
L/L. Vogel
LA/D. Lichty
Dr. Ruth L. Thomas, NARS

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
WASHINGTON, D.C. 20546

OFFICE OF THE ADMINISTRATOR

JAN 22 1975

MEMORANDUM

TO: All Supervisors

FROM: AC/Associate Administrator for Center Operations

SUBJECT: Word Processing Feasibility Survey

On January 23, 1975, the Administrative Services Division and Word Processing specialists from the National Archives and Records Service, General Services Administration, will begin a study of the secretarial workload in various Center Operations Offices. This study is the first and most important step in conducting a word processing feasibility survey to improve our communications and work processes.

Complete and accurate information about workloads, communication, and administrative processes is vital and will require everyone's cooperation. The survey team will be collecting data concerning the work processes of all secretarial and administrative support personnel and interviewing selected originators of communications during the next two weeks.

Please assist the survey team in this important effort and do what you can to facilitate the collection of data and the timely completion of the survey.

Elmer S. Grod

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SUGGESTED INTERVIEW QUESTIONS FOR SUPPORT STAFF

1. What specific jobs do you perform in your office?

2. What specific nontyping activities do you perform? (Copying, filing, etc.)

3. What administrative jobs do you perform? (Receptionist, research, etc.)

4. What do you like most about your job? Least?

5. What would you change about your job?

6. What administrative duties not yet assigned do you think you could do?

7. Do you now work for one principal, or several? Is it important to you to identify with your boss?

8. What problems arise which hinder your work? Examples: Having to wait in line to use copying machines, having to provide telephone coverage for another office, etc.

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SUGGESTED INTERVIEW QUESTIONS FOR PRINCIPALS

1. What do you think is the workload in your office?

2. How well is this workload being performed?

3. What problems would you like to see resolved in the support area?

4. What administrative jobs are now being done by your support staff?

5. What additional administrative jobs would you like to delegate to a support staff if that were possible?

6. Do you have a private secretary? If so, does she perform many non-typing functions for you? Does she perform nonsecretarial functions? If she is on vacation or is ill, who fills in for her?

ANALYSIS OF WORD PROCESSING
POTENTIAL FOR THE OFFICE OF APPLICATIONS
AND THE OFFICE OF CENTER OPERATIONS, NATIONAL
AERONAUTICS AND SPACE ADMINISTRATION

I. INTRODUCTION

The fact that NASA has requested assistance in conducting a word
processing feasibility study indicates this agency's recognition of
word processing as one solution to the recessionary-inflationary crises.
In addition, this agency has recognized the advantages of harnessing the
latest office technology.

A. Origin of the Report

As a result of an inquiry from the National Aeronautics and Space
Administration (NASA) regarding the availability of technical assistance
in conducting a word processing feasibility study, and as a result of
the need for a pilot study to develop a model report to be used by the
regional and technical assistance staffs of National Archives and
Records Service (NARS), the Acting Assistant Archivist for Records
Management, NARS, agreed to conduct a word processing feasibility study
for NASA at no cost to this agency. Specifically, on January 16, 1975,
representatives of NASA and NARS agreed that two management analysts
and one management analysis officer from NARS, aided by six management
analysts from NASA, would conduct a word processing feasibility study
of the Office of Applications and the Office of Center Operations.

The arrangements for this study would accomplish two purposes:
(1) NASA would not only have professional help in analyzing word pro-
cessing potential for two of the codes in headquarters, but their own
analysts would receive training which will enable them to complete
in-house feasibility studies of the entire headquarters complex, and
(2) NARS would have a model pilot project and report for use by its
regional and technical assistance staffs in conducting future contracted
studies. Representatives of NASA agreed that the formal report issued
at the completion of the study could be made available as a sample re-
port for use by NARS in its word processing activities.

B. Purpose of the Feasibility Study

The purpose of the feasibility study was to determine if the volume of keyboarded materials and other related factors make it possible for NASA to consider the implementation of word processing systems in the two affected offices.

In order to attain decision-making capability, the management of the two offices would need to know the division of work within the secretarial/clerical staff as well as the percent of time spent in major work categories, the attitudes of the secretarial/clerical staff and the principals relating to activities of the codes, the organizational and geographic considerations of word processing, and the cost effectiveness of the projected system.

The management of both offices recognized the importance of a valid pilot study as it relates to decisions that will ultimately affect policy of NASA headquarters. Compatibility of systems and of equipment is vital if NASA is to institute a headquarters-wide integrated approach to word processing.

C. Scope of the Feasibility Study

Two headquarters offices, the Office of Applications (Code E) and the Office of Center Operations (Code AC), were the subjects of the feasibility study.

Within Code E, the activities of 29 secretaries/clerks and 67 principals were surveyed. Within Code AC, 56 secretaries/clerks, 13 miscellaneous office employees, and 145 principals were surveyed.

Code E is located on the first and second floors of Federal Office Building 10B (FOB 10B) and Code AC is located on level A and floors one and two of FOB 10B, the fifth and sixth floors of FOB 6, and the seventh floor of the Reporters Building.

D. Methodology of Subject Conditioning and Data Collection

In order to elicit the cooperation of the subjects of the survey and to allay unfounded fears or misunderstandings of the study, a series of steps were taken. NASA management of Codes E and AC announced the feasibility study through a series of memorandums to headquarter employees, affected secretarial/clerical personnel, and supervisors (see Appendix A).

On January 21, 1975, the NARS team met with the NASA team to articulate survey procedures. On January 22, 1975, NARS and NASA team members held a briefing session for headquarters' coordinators. The

purpose of this meeting was to apprise representatives from all the NASA components of the purpose of the survey and to permit the various codes to have input into the pilot study, the decisions of which will ultimately affect their own operations. On January 23, 1975, NARS and NASA teams held briefing sessions separately for the support staffs of Codes E and AC. These sessions provided an opportunity for the survey teams to present the rationale of the study and to answer questions or address concern of those directly involved in data submission.

The two-week data collection period began on January 27, 1975. NARS Optional Forms 147 (Daily Typing and Nontyping Log) and 148 (Interview Sheet) were used for the collection of raw data (see Appendix B). The log was designed to collect data on the typing productivity of each secretary/clerk and the amount of time spent on the major categories of administrative support. The interview sheet was designed to record data from one-to-one interviews of the secretaries, clerks, and key principals by the analyst assigned to a particular organizational component. The interviews were held strictly confidential and were conducted for several purposes: (1) to determine the work preference and aptitudes of each secretary/clerk, (2) to determine career goals of the secretaries and clerks, (3) to record work performance suggestions by both secretaries/clerks and principals that could be helpful in decision-making activities, and (4) to answer any questions individuals might have about the survey. Interview sheets were not filled in in the presence of interviewees as it was felt that this would inhibit response. Suggested interview questions are shown in Appendix C.

By the beginning of the second week, the interviewing of the secretaries had been completed and the analysts started the interviewing of principals and data summarization of the first week's work. NARS Optional Forms 145 (Multipurpose Typing Summary) and 146 (Multipurpose Nontyping Summary) were used to summarize activities from the daily log (see Appendix B). These forms were designed to categorize and determine the volume or amount of time spent on typing and nontyping activities and to determine the type and volume of original typing input. Personnel and equipment projections were to be based on these summaries and other findings.

At the conclusion of the data collection period, the Multipurpose Typing and Nontyping Summaries were used for a consolidated summary by organizational element; and the totals from the weekly summaries were entered on each secretary/clerk's Profile Analysis, Optional Form 149 (see Appendix B). Career development notations and preference and aptitude notations were entered on the Profile Analysis from the individual Interview Sheets. The Profile Analysis was designed to summarize information that can be used for placement purposes.

The PERT chart, figure 1, illustrates the sequence of activities that took place during the feasibility study.
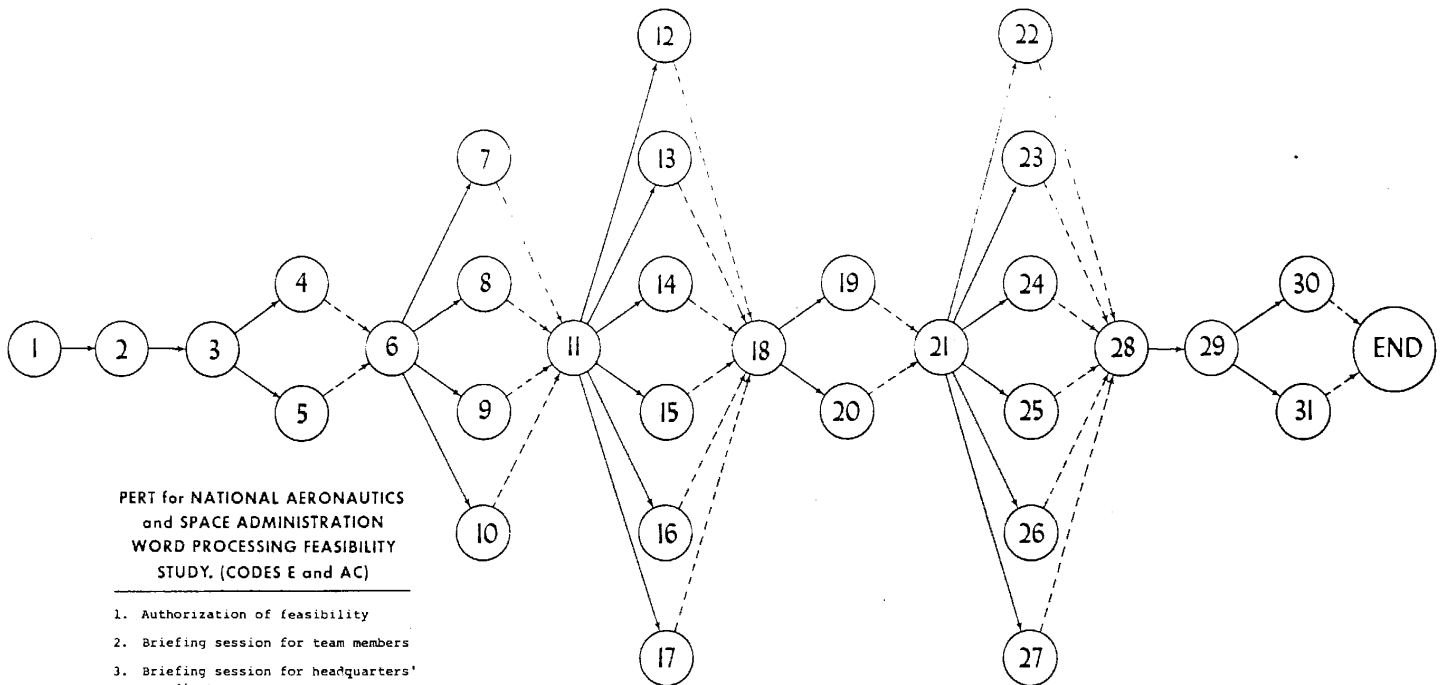
PERT for NATIONAL AERONAUTICS and SPACE ADMINISTRATION WORD PROCESSING FEASIBILITY STUDY. (CODES E and AC)

1. Authorization of feasibility
2. Briefing session for team members
3. Briefing session for headquarters' coordinators
4. Briefing session for Code AC
5. Briefing session for Code E
6. Instructions on use of and distribution of logs
7. First week data collection - Code E
8. Interviews of secretaries - Code E
9. First week data collection - Code AC
10. Interviews of secretaries - Code AC
11. Review session with team members of first week's work
12. Second week data collection - Code E
13. Interviews of principals - Code E

14. Data summarization of first week's work - Code E
15. Second week data collection - Code AC
16. Interviews of principals - Code AC
17. Data summarization of first week's work - Code AC
18. Assessment of survey status
19. Data summarization of second week's work - Code E
20. Data summarization of second week's work - Code AC
21. Data analysis

22. Projection of personnel
23. Projection of equipment
24. Projection of staffing patterns
25. Projection of geographic location
26. Projection of organizational structure
27. Cost analysis
28. Preliminary review with representatives of Codes E and AC
29. Formal briefing session for top management
30. In-depth briefing session for Code E
31. In-depth briefing session for Code AC

Figure 1 - PERT for National Aeronautics and Space Administration
Word Processing Feasibility Study. (Codes E and AC)